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TI - POWER CONTROL SYSTEM OF HIGH FREQUENCY INVERTER

AB - PURPOSE: To enable use of relatively low rated voltage at a main circuit thyristor in a high frequency inverter by maintaining constant load current and controlling the electric power of a load by controlling the phase difference between the load current and the voltage.

- CONSTITUTION: When four sets of bridge circuits each having a thyristor and a commutation capacitor are connected in a ring to supply a current to a load R having a tank circuit, the current and voltage of the load R are detected by PT and CT to supply them to a phase difference detector PD. An amplifier AMP compares the signal proportional to the phase difference therebetween with the set value P_s of the power to thereby control the firing of the respective thyristors by the deviations. Since the AC output of lower or higher frequency than the resonant frequency of the load R is supplied to alter the phase difference between the load voltage and current to thereby control the supply power, the voltage of the capacitor does not vary according to the magnitude of the load to thus reduce the size of the thyristors.

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IN - NIWA SUSUMU; others: 02

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